

perature and leukocytes are normal invariably show a rapid sedimentation.

In the treatment of latent streptococci pelvic infections the test is of very real value. The streptococci may remain alive, yet quiescent, in pelvic cellular tissue for many years. They readily become activated and, freed from their surrounding barriers by surgical trauma, may pass into the blood stream. In the presence of a postabortal uterine infection, even though the temperature and leukocytes are normal, an appreciation of a rapid sedimentation time, will prevent us doing an unnecessary curetage and breaking down nature's line of defense.

The sedimentation test is of real value in the diagnosis of infection, and when correlated with the history, physical signs, temperature and leukocyte count, has genuine prognostic significance.

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Disease Prevention

Pathogenicity of *Brucella Mellitensis*, Variety Abortus, for Human Beings—There has been doubt in the minds of many investigators as to whether *Brucella mellitensis*, variety abortus (the cause of infectious abortion in cattle), may produce infection of human beings. Alice Evans¹ has shown that this organism is very closely related to the one which causes Malta fever, which is highly infectious for man, and many other workers have confirmed her observations. Meyer and Fleischner,² however, found that the abortus variety is very much less virulent for monkeys and other laboratory animals than is the true *mellitensis*.

During the past three years instances have been reported in various parts of the United States in which human beings who were suffering from obscure fevers were found to have living *Brucella abortus* in the urine, or in the blood stream, or to have high titres of specific agglutinins for *Brucella abortus* in the blood. Evans³ has recently assembled twenty cases from the American literature since 1924, and refers to a number of other cases which were reported to her by personal communication. Similar cases have been reported in South Africa, Italy, Palestine, and the Dutch East Indies; and in practically all instances there is history that the patients drank raw milk from herds which were infected with infectious abortion, or handled infected cattle or hogs.

The evidence is strong, therefore, that human beings may become infected with *Brucella mellitensis*, variety abortus. The course of the disease in man is febrile, of the undulant fever type like Malta fever, but appears to be less severe than in Malta fever. It has been mistaken for typhoid fever, meli-

ary tuberculosis and other prolonged, febrile diseases, and is especially liable to be confused with tularaemia.

These observations are important because of the high incidence of infectious abortion among dairy herds in many parts of the country. Experiments have shown that the organism may be recovered with little difficulty from the milk of a large proportion of infected cows, and there can be no doubt that varying numbers of the bacteria may be ingested with raw milk.

It is unfortunate that certain interested industrial organizations are making use of these facts in propaganda against certified milk, but it should be remembered that this is being done for business reasons. The certified dairies in the past have adopted measures to control known dangers from raw milk, and it is to be expected that they will take the necessary precautions to control infectious abortion. Economically, it pays to control infectious abortion in dairy herds, whether they are certified or not, and experience has shown that this can be done by careful selection of new stock, care of the calves and young cattle, and vaccination.

The available evidence indicates that the danger of infecting human beings, while real, is probably not great; but further observation is necessary before we can be sure of the actual degree of danger. However, it can be said that there is no emergency which necessitates placing a ban upon all raw milk and that our present knowledge of infectious abortion does not justify the condemnation of certified milk.

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Neuropsychiatry

Physical Constitution and Personality—Even before Gall attempted to read personal traits in the projections and depressions of human cranium, there existed considerable interest in the relation of body construction type and the personal reaction type. Recently Kretschmer discussed the topic under the title "*Körperbau und Character*" (English by Sprott, "*Physique and Character*"). Lately Wertheimer and Hesketh, after a brief review of related work, further utilized anthropometric data, especially a simple anthropometric index, in the study of "*The Significance of the Physical Constitution in Mental Diseases*." They used Kretschmer's main division of body types: (a) the pyknic, associated with the open (extroverted, social, syntropic), reaction type and present in about 60 per cent of manic-depressive patients; (b) the asthenic and athletic body types, associated with the shut-in (introverted, schizoid, idiotropic), reaction type, which, especially the asthenic, is commonly found in schizophrenic (dementia precox) patients. They pointed out variations in findings at different age levels; also they admitted many transitional and contrasting cases.

The physician in general practice naturally asks what is the net result of these findings, when applied

1. Evans, Alice C.: *Jour. Infect. Dis.*, 1918, 22:580.

2. Meyer, K. F., and Fleischner, E. C.: *Proc. Soc. Exper. Biol. and Med.*, 1919, 16:152; also *Trans. Amer. Ped. Soc.*, 1920, 32:141.

3. Evans, Alice C.: *Jour. Amer. Med. Assn.*, 1927, 88:630.

to the diagnosis, prognosis and treatment of his patients. From the point of view of clinical psychiatry, the following answer appears justified:

1. There undoubtedly exists certain correlation between body types and personality. The presence of a strongly deviating body type by no means always spells the approach of mental disaster; however, as Adolf Meyer might say, it suggests "an increased liability" in certain directions. Fortunately in diagnosis we need not depend on these data alone. It is generally possible during preschool age, certainly before puberty, to diagnose these and other deviations in reaction type by means of psychiatric tests and observation of behavior. Naturally the usual kind of test of intelligence is of little aid since the essential problem is to ascertain the motives and mechanism of reactions, rather than results in terms of quantity and accuracy.

2. From the point of view of prognosis and therapy, it is important that the many forces we sum up under the title of "environment," exercise an influence upon the development of the reaction type. More than that, they are capable to substantially enhance or impair aggressive, defensive and stabilizing capacities of an individual. Then also the environment is not often so fixed as to be incapable of moderation, hence the person carrying "an increased liability" need not be overtaxed beyond capacity to endure.

To utilize these opportunities is at once the obligation and the promise of the present-day psychiatry; which, not forgetting the already stricken, primarily must aim at prevention of the first break. However, it is the physician in first contact with the child or youth, upon whom generally rests the responsibility for early diagnosis of such deviations.

About one-half of first admissions to state hospitals belongs to the two main groups mentioned: the manic-depressive and the schizophrenic. Some of these disasters no present-day effort could have saved; others, entering the gate, undoubtedly might have continued more or less efficient and happy members of human society had they been given early aid to maintain sufficient adjustment to their particular reality.

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Orthopedics

Backaches—What They Indicate—The routine examination of the back should be included in all physical examinations where backache is a symptom. This part of the thorough study of the average patient has not infrequently been neglected. Irregular at times have prospered because of such neglect in otherwise thorough examinations. There is nothing essentially mysterious in back problems, though exact diagnosis is difficult and sometimes impossible.

The following is a brief outline useful in routine physical examination of the back:

1. Bare the whole back.
2. Inspect it in the standing, sitting, and lying positions.
3. Note variations of the normal curves both antero-posteriorly and laterally.
4. Note the attitude of the head, the level of the shoulders and pelvis.
5. Put the various segments of the spine through their

active range of movement and note the limitations and subjective complaints in each.

6. Give attention to the musculature, noting particularly muscle spasm and muscle tone.

7. Palpate the various segments (standing, sitting, and lying) throughout the entire spine; but particularly of the area of complaint, noting muscle spasm and points of maximum tenderness.

8. Straight leg raising in the supine position gives important information regarding sacrolumbar and sacroiliac disturbances.

9. Note the stance and the feet. They give the clue to many postural backaches.

10. Study the segment involved with both antero-posterior and lateral x-ray films.

The variations from the normal, and the localization of the symptoms found in such an examination, in conjunction with the history, in a large percentage of cases will give data on which to base a reasonable diagnostic conclusion.

From an orthopedic standpoint, backaches may be due to trauma, static defects, arthritis or destructive bony lesions. Frequently one, two or three of these complicate each other. All the various lesions that one finds in joints elsewhere may be found in the joints of the spine—strain, sprain, sprain fracture, minor and gross fracture. The back in this regard differs from an extremity only in that the nerve tracts are more intimately associated, and the treatment by rest and protection is obtained with more difficulty.

Static, back strain, backaches due to postural, developmental or muscular defects, are almost as common as eyestrain headaches. The headache from eyestrain differs essentially in no way from the backache due to back strain, except in location.

The arthritic backache calls for a consideration of all the other complicating problems, as well as a study of the general bodily factors involved in arthritis. Arthritis displays itself most often at those points of the body which are most subject to chronic trauma or strain.

In treatment of the orthopedic backache, keep in mind that the injured joint needs rest and protection; that the strained joint needs support, and that the arthritic joint responds most readily to both rest and protection, plus a removal of the causal foci.

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Orthopedics

Progress in the Study of Arthritis—Under this caption appears an editorial in a recent number of the *Journal of the American Medical Association*. The writer comments on the work of Cecil and Archer, and of Pemberton and his co-workers, and considers that these "more recent contributions advance our knowledge."¹ In what respect the writer neglects to say.

There are two ways of advancing our knowledge in medicine. The first method is to develop an idea from the inner consciousness, and then to accumulate facts to support it. This is rapid, spectacular, often temporarily successful and often profitable. The cults follow it exclusively. It leads along pleasant paths to oblivion. The second method is by patient investigation to assemble definite facts, and then to reason to a conclusion. It is slow, laborious,

¹ J. A. M. A., 1927, Vol. 88, p. 651, February 26, 1927.